DETAILED ACTION

1. The examiner acknowledges the receipt of the argument filed July 18, 2008.

Claims 1-10, 18-19 have been cancelled. Claims 11-17, 20-24 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 11-17, 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taal et al. (WO 00/61695) (translated in US 6,818,093) in view of Wang (US 6,428,900 B1) for the reasons adequately set forth from paragraph 5 of the office action of May 29, 2008.

11. (currently amended) An adhesive composition containing

(a) ~~an elastomeric block copolymer having a diblock content of more than 40%~~ elastomeric block copolymers of the A-B and A-B-A type, wherein the proportion of A-B with respect to the entirety of block copolymers is more than 40%, wherein the A block is a polymer made of monomers selected from the group consisting of styrene and its homologs, α-methylsyrene, 4-substituted styrenes, 4-(4-phenyl-n-butyl) styrene, 4-alkylstyrenes, 4-n-propylstyrene, 4-cyclohexylstyrene, 5-substituted styrenes, 5-alkylstyrenes, 5-tert-butylstyrene, 3,5-disubstituted styrenes, 3,5 dialkylstyrenes, 3,5-diethylstyrene, 3-5 di-n-butylstyrene, 2,4 disubstituted styrenes, 2-ethyl-4-benzylstyrene, 2,4-dialkylstyrenes, 2,4-dimethylstyrenes and vinyltoluene, and wherein the B block is a polymer made of monomers selected from the group consisting of a conjugated, lower aliphatic diene, butadiene, 1,3-pentadiene, isoprene, 2,3-dimehtylbutadiene, 1,3-hexadiene, and fully or partially hydrogenated derivatives thereof;

(b) a sulfonated copolyester;

(c) if desired, further auxiliary additives.

Regarding claim 11 (line 16), the recitation “if desired” is taken to mean “optional”. Regarding claim 12 (line 7), the recitation “preferably” is taken to mean “optional”.

Taal et al. (translated in US 6,818,093: col. 6, line 37-55; col. 8, Table 1; col. 9, claim 5) disclose working examples comprising most of the ingredients, such as SIS triblock copolymer (Kraton 605), SI diblock copolymer (LVS-1), tackifiers Regalite R10, Regalrez 1018, plasticizers (Shell-Ol 4178), and auxiliary additives such as antioxidant (Irganox 1010) as claimed. Regarding claim 16, the composition as disclosed in Table 1 of Taal et al. clearly indicate that the proportion of A-B of the entirety of block copolymers is not more than 90%.

Regarding claims 20-21, Taal et al. (col.10, claim 9) clearly disclose a bonding method that involves applying adhesive to the substrate (films or non-wovens) where the substrate has been coated with a dermatologically compatible coating. Since a dermatological coating is used, it would not be difficult to one of ordinary skill in art to recognize and appreciate that the applying the adhesive films or non-wovens onto a skin substrate. Therefore, the examiner believes that the features of claims 20-21 have been met by Taal et al.

TABLE 1

	Comp.	E1	E2	E3	E4	E5	E6	E7
I Components [in % by weight]								
Kraton 605	21	11	11	11	11	11	11	
MBG 275	24	24	24	24	14	24	14	24
MBG 278	36	36	36	36	36	36	36	36
LVS-4		10	28		10	10	10	29
Regalite R 10					10			
Regalrez 1038						10	10	10
Parapol 950				28	18	8	18	
Shell-Öl 4178	18	18						
Irganox 1010	1	1	1	1	1	1	1	1
II Phys. data								
η(150° C.)[mPas]	3359	780	3155	1510	2270	1435	1137	1400
Ring & ball [° C.]	98.9	81.2	95.1	99.7	97.3	88.6	92	67.7
III Adhesion values [N5 cm^{-1}] after storage								
24 h/RT without lotion	3.7*	3.6*	2.2	2.1	2.7*	3.5*	3.1*	4.5*
24 h/RT lotion 1	2.8	3.6	3.6	2.6	5.3*	3.6*	2.5	3.4
24 h/RT lotion 2	1.5	3	4*	1.9	3.4*	3	1.4	3.5
24 h/RT lotion 3	1	2.7	3.5*	1.7	3.3	0.8	3.1	1.7
4 h/40° C. without lotion	3.9*	4.6*	4.2*	2.3	3.6*	5.1*	3.4*	3.7*
4 h/40° C. lotion 1	2.3	3.8*	3.5	1.6	4.2*	3.5	3.6*	3.7*
4 h/40° C. lotion 2	1	2.1	2.9	1.3	3	2.5	0.9	4.5*
4 h/40° C. lotion 3	1.2	1.9	2.4	0.9	1.8	1.6	2.4	1.1

*= Tearing of material or fibers

1) Kraton KX 605 (Shell): SIS block copolymer containing 29% styrene and 17% diblock
2) MBG 278 (Hercules): aliphatic completely hydrogenated cyclopentadiene resin (hydrocarbon resin)
3) MBG (Hercules): aliphatic, aromatically modified, partly hydrogenated hydrocarbon resin
4) LVS-I 101 (Shell): styrene/isoprene diblock copolymer containing 13% styrene
5) Regalite R 10 (Hercules): aliphatic, completely hydrogenated cyclopentadiene resin (hydrocarbon resin)
6) Regalrez 1018 (Hercules): aliphatic, completely hydrogenated cyclopentadiene resin (hydrocarbon resin)
7) Parapol 950 (Esso): polybutylene
8) Shell-Öl 4178 (Shell): naphthenic oil
9) Irganox 1010 (Ciba-Geigy): antioxidant

Regarding claim 17, Taal et al. (col. 8, line 10-25) disclose that the peel strength value in N/5cm. Therefore, the peel strengths disclosed can be converted to N/m by a factor of 20. Therefore, the examiner has a reasonable basis that the claimed peel strength has been met by Taal et al. Regarding claimed “wet peel strength”, applicants must recognize that the testing method disclosed in Taal et al. and the method employed for the “wet peel strength" involves a relative humidity of 50%, at an angle of 180 degree, and at a rate of 300 mm/minute.Therefore, the values disclosed in Taal et al. and the values as claimed can be properly compared.

Taal et al.	Applicants' test method (US 5,028,485, col. 4, line 20-38)

peel strength (so-called adhesion value) to DIN 53 530 using a Zwick type 1435 tensile tester at 20° C./50% relative humidity. The 50 mm wide sample is separated at a rate of 300 mm/min. at an angle of 180°. The peel strength is expressed in $N.5cm^{-1}$. The coating of the sample was measured at the earliest after 48 h the samples were stored for 4 h at 40° C.	A) 180° peel adhesion on wet hydrophilic viscose based non woven Samples are conditioned for 24 hours at 23° C. ± 2° C. at 50% relative humidity, prior to start testing. The standard test substrate (viscose based hydrophilic non woven operation drape) is applied to a stainless steel panel by means of a double coated tape. Test specimens of a hydrophobic viscose polyester based non woven coated with the pressure sensitive adhesive composition of the invention with a coating weight of 60 g/m^2 are cut out with dimension 2,5 × 15 cm. The test specimens are laminated upon the hydrophilic non woven once in each direction with a 0,5 kg roller. After 30 min. an excess (minimal 2 ml per specimen) of destilled water is added over the whole length at one side of the adhesive tape, and the water is allowed to penetrate underneath the adhesive tape to the other side. After 5 min. dwell the adhesive tape is peeled off from the non woven under an angle of 180° with a tensile tester at a speed of 300 mm/min. The average peel off value is recorded in N/m.

The difference between the invention of claims 11-17, 20-24 and Taal et al. is that Taal et al. do not teach an adhesive composition comprising sulfonated copolyester.

Wang (abstract; col. 1, line 5-22; col. 3, line 36 to col. 4, line 17) disclose a water-sensitive hot melt adhesive composition based on about 10% to about 90% by weight of one or more sulfonated polyester copolymer(s), and a broad range composition of plasticizer(s), tackifier(s), and stabilizer(s). Regarding the claimed elastomeric block copolymer, Wang (col. 17-18, claims 5-6) clearly teach elastomeric block copolymers having a melting pointer greater than 50°C (solid at room temperature). Regarding claim 24, Wang (col. 6, line 66 to col. 7, line 6) clearly disclose the use of multifunctional monomers for preparing the taught sulfonated polyesters. Therefore, the examiner has a reasonable basis that the claimed “branched” feature is inherently possessed in

Wang. In view of the substantially identical field of endeavor of Taal et al. and Wang, and motivated by the expectation of success of developing an adhesive composition having the advantages of water-solubility, water-dispersibility, water releasability and repulpability (Wang, col. 1, line 9-22), it would have been obvious to one of ordinary skill in art to incorporate the sulfonated polyester copolymer(s) teachings into Taal et al. to obtain the invention of claims 11-17, 20-24.

Regarding claims 22-23, Wang (col. 1, line 23-46) disclose various applications that meet the features of claims 22-23. In view of the substantially identical field of endeavor of Taal et al. and Wang, and motivated by the expectation of success of developing an adhesive composition having the advantages of water-solubility, water-dispersibility, water releasability and repulpability (Wang, col. 1, line 9-22), it would have been obvious to one of ordinary skill in art to incorporate the sulfonated polyester copolymer(s) teachings and their applications or products into Taal et al. to obtain the invention of claims 22-23.

Hot melt adhesives typically exist as a solid mass at ambient temperature and can be converted to flowable liquid state by the application of heat. These adhesives are particularly useful in manufacturing of a variety of disposable goods where bonding of various substrates is often necessary. Specific applications have included disposable diapers, sanitary napkins, pantyshields, surgical drapes, hospital pads and adult incontinence briefs; collectively known as disposable nonwoven products. Other diversified applications have involved paper products, packaging materials, tapes and labels. In these applications, the hot melt adhesive is heated to the molten state and then applied to a substrate. A second substrate is immediately laminated to the first and the adhesive solidifies on cooling to form a strong bond. The major advantage of hot melt adhesives is the lack of a liquid carrier, as would be the case for water-based or solvent based adhesives, thereby eliminating the costly drying step during application. Suitable hot melt adhesives must possess the appropriate bond strength to adhere the substrates involved, and must also possess adequate flexibility, staining or bleedthrough resistance, suitable viscosity and open time to function on commercial equipment, acceptable stability under storage conditions, and acceptable thermal stability under normal application temperature.

Response to Arguments

4. Applicant's arguments filed July 18, 2008 have been fully considered but they are not persuasive. Applicants argue that Taal et al. teach with respect to a "dermatologically-compatible coating" in claim 9 has nothing to do with the adhesive that is illustrated in Table 1 of Taal et al. However, the examiner is unclear how the argument would help to overcome the rejection of applicants' claim 11 and its dependent claims since at least claim 11 has nothing to do with argument being presented.

Applicants also argue that applicants' claim 17 requires a wet peel strength that is obtained by a test method that is different from the test method of Taal et al. However, applicants fail to recognize that the claimed invention is an adhesive

composition, not the test method for evaluating wet strength. In view of the substantially identical composition disclosed in Taal et al. and the composition as claimed, the examiner has a reasonable basis that the claimed adhesive properties of "180 degree wet peel strength of more than 8 N/m" is inherently possessed in Taal et al.

Applicants argue that it is correct that Taal et al. do not teach a composition comprising a sulfonated copolyester. Then applicants argue that the "sulfonated copolyester" teachings of Wang et al. is not combinable with Taal et al. because Wang et al. do not teach the specific block copolymers as claimed. However, the examiner disagrees. Applicants must recognize that Taal et al. have already taught the sulfonated copolyester as claimed. Therefore, Wang et al. are not required to teach the block copolymers as claimed. Since both Taal et al. and Wang et al. relate to using similar block copolymers, motivated by expectation of success of developing an adhesive composition having the advantages of water-water-dispersibility, water-releasability, and repulpability, it would have been obvious to one of ordinary skill in art to incorporate the sulfonated polyester copolymers of Wang et al. into Taal et al. to obtain the invention as claimed.

Regarding applicants' argument that Wang et al. teach the sulfonated copolyesters to be used with ethylene glycol and propylene glycol block copolymers, nothing more and thing less, Applicants fail to recognize that one skill in art with a good understanding of block copolymers would not be self-limiting to the teachings as taught in Wang et al. Since both Taal et al. and Wang et al. relate to using similar block copolymers, motivated by expectation of success of developing an adhesive

composition having the advantages of water-water-dispersibility, water-releasability, and repulpability, it would have been obvious to one of ordinary skill in art to incorporate the sulfonated polyester copolymers of Wang et al. into Taal et al. to obtain the invention as claimed.

Regarding applicants' argument that since Wang et al. do not teach any attributes that is specific effect to the sulfonated copolyesters to motivate one of ordinary skill in art to incorporate the "sulfonated copolyesters" teaching of Wang et al. into Taal et al. because the polymeric composition of Wang et al. and Taal et al. are fundamentally different. However, applicants fail to recognize if Wang et al. also teach the block copolymers as claimed, the rejection should be 102 rejection instead of a 103 rejection.

Regarding applicants argument that the incorporation of sulfonated copolyester into the composition would not result in water-solubility, and water-releasibility, applicants fail to provide any evidence to support the argument. Regarding applicants argument that the combined teachings would not lead to the strikingly improved wet-peel strength, applicants fail to recognize that the argued wet strength is a property that is inherent to the composition as taught in Taal et al. and Wang et al.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.
Primary Examiner
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